

Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors

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Using the most recent IMPLAN data available (2014) adjusted for 2016, 13 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Pawnee County economy.¹

These 13 sectors have a total direct output of approximately **\$280.6 million** and support **604.5 jobs** in Pawnee County. Running the model for all 13 sectors simultaneously produces the following results:

Agriculture, Food, and Food Processing Sector Contribution to Overall Pawnee County Economy						
Impact Type ²	Employment	% Employment	Total Value Added ³	Total Value Added % of Gross Regional Product ⁴	Output ⁵	Output % of Gross Regional Product
Direct Effect	604.5	13.20%	\$105,403,159.87	31.44%	\$280,576,640.89	83.69%
Indirect Effect	177.2	3.87%	\$14,063,389.26	4.19%	\$24,141,555.20	7.20%
Induced Effect	145.5	3.18%	\$10,081,252.48	3.01%	\$18,096,509.35	5.40%
Total Effect	927.3	20.25%	\$129,547,801.60	38.64%	\$322,814,705.45	96.28%

As shown in the above table, agriculture, food, and food processing sectors support **927.3 jobs**, or **20.25%** of the entire workforce in the county. These sectors provide a total economic contribution of approximately **\$322.8 million**, roughly **96.28% of the economy**.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 13 agriculture, food, and food processing sectors is approximately **\$129.5 million**, or **38.64% of the GRP**. This indicates that personal income, business income, and taxes generated by these sectors account for **38.64% of the total economy**.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

1 Article on building a contribution analysis in IMPLAN that avoids double counting:

http://www.implan.com/index.php?option=com_content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

2 Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

3 Value added = labor income + indirect business taxes + other property type income.

4 GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

5 Output = intermediate inputs + value added.

In the top ten agriculture, food, and food processing sectors by employment, the beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector is the top employer with **426.7 employees**. This table also shows the amount of jobs that are created by the agriculture industry in Pawnee County.

Top Ten Sectors by Employment		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	436.7	\$161,701,415.67
Meat processed from carcasses	68.3	\$31,888,649.71
Grain farming	56.8	\$60,010,404.77
Support activities for agriculture and forestry	52.8	\$5,315,986.93
Wholesale trade	42.7	\$8,911,595.26
Truck transportation	24.2	\$3,797,790.07
All other crop farming	19.7	\$5,054,519.35
Hospitals	15.9	\$2,017,646.92
Limited-service restaurants	14.9	\$1,060,337.99
Monetary authorities and depository credit intermediation	14.7	\$2,566,755.34

The beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming sector directly contributes approximately **\$161.7 million** to the Pawnee County economy. The table below also shows the amount of revenue that is generated in other industries by having a strong agriculture industry.

Top Ten Sectors by Output		
Sector	Total Employment	Total Output
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	436.7	\$161,701,415.67
Grain farming	56.8	\$60,010,404.77
Meat processed from carcasses	68.3	\$31,888,649.71
Oilseed farming	3.2	\$11,359,572.81
Wholesale trade	42.7	\$8,911,595.26
Other animal food manufacturing	6.2	\$8,611,359.57
Support activities for agriculture and forestry	52.8	\$5,315,986.93
Owner-occupied dwellings	0.0	\$5,277,700.44
All other crop farming	19.7	\$5,054,519.35
Truck transportation	24.2	\$3,797,790.07

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture, food, and food processing sector and the output they contributed to the Pawnee County economy.

All Agriculture, Food, and Food Processing Sectors		
Sector	Total Employment	Total Output
Oilseed farming	3.2	\$11,359,572.81
Grain farming	56.8	\$60,010,404.77
Vegetable and melon farming	0.6	\$167,392.81
Cotton farming	0.4	\$146,224.83
All other crop farming	19.7	\$5,054,519.35
Beef cattle ranching and farming, including feedlots and dual-purpose ranching and farming	436.7	\$161,701,415.67
Poultry and egg production	0.4	\$472,981.63
Animal production, except cattle and poultry and eggs	0.7	\$172,364.28
Other animal food manufacturing	6.2	\$8,611,359.57
Meat processed from carcasses	68.3	\$31,888,649.71
Bread and bakery product, except frozen, manufacturing	3.5	\$362,573.31
Frozen cakes and other pastries manufacturing	0.2	\$31,462.69
Veterinary services	7.8	\$597,719.46

All 105 counties in Kansas have an IMPLAN model and an agriculture, food, and food processing contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Pawnee County, the retail sector was omitted.